# It's the hands that suffer more than the ears

by Derryck Draper



Berghaus

The melt-sealed end of a length of webbing whipping in the wind has the capacity to put holes in clothing and shred skin, and, once rucksac harness and hip belt adjustments have been carried out, there can be up to six textile 'bullets' seemingly eager to carry out the maximum damage. And the hands suffer more than the ears because their very flexibility places them in the path of flaying nylon whether grasping a shoulder strap or swinging freely at the side. Turning up the coat collar or pulling the hat further down can usually protect against shredded ear lobes.

Manufacturers have devised a number of solutions, some more logical than others, but the majority have depended on an attention to detail in tidying the loose ends by tucking them into some form of plastic 'keeper' attached to the standing part of the webbing. A good idea, but a non-starter in the context of friends pressurising for an early start and a long day on the hill. A British brand owner has promised a radical development later in 2003, but – in the interests of confidentiality – it must be a case of 'wait and see'. My own solution is to carry a supply of rubber bands, travel alone and leave plenty of time for preparation.

Modern rucksacs carry a number of hardware elements that have moved a long way since the military-led use of steel buckles and rings subsequent to World War II. An open-ended list might include closure buckles on lids and pockets; lock buckles on hip belts; adjustment buckles on shoulder harnesses, sternum straps and hip belts; and fastenings for external attachments such as ice axes, skis or walking poles.

## Development

In general these items will be made in one of two different polymers, and specified to meet the strength requirement of the intended use. For example, the burst strength of the buckles adjusting the shoulder harness will be greater than that of the buckle required as a pocket closure – it may therefore be a different material specification and certainly will be a different design. Hip belt buckles carry the largest load, both vertically and horizontally.

Although obviously available from much earlier, acetal resin and nylon components became commonplace from the 1970s and forwards; the former material for its tensile strength, the latter for its cold



*Above:* ITW Nexus Whistleloc buckle with its high decibel sound is an excellent signalling device.

weather performance. As technology has improved, so complexity – and the 'cleverness' – of the individual components has become an expectation on the part of the design element for rucksac manufacturers.

Not surprisingly, the military are now actively seeking out that same technology with a view to adjusting it for their own purposes. All the major hardware brands are producing 'stealth' products that contain an element in their makeup to produce an extremely low infrared signature. This matches similar work carried out by textile process houses in developing fabrics for combat dress, body armour and other personal tactical equipment.

In the United Kingdom one manufacturer of supermarket trolleys has fitted the child carrying versions with a security harness equipped with 'stealth' buckles drawn from National Moldings' Duraflex range. Although this is for reasons of expediency, it does add a possible new dimension to the rigours of occasionally retrieving such equipment from the gullies and waterways of downtown Britain.

The same company is now incorporating the Microban antimicrobial process into its Lock Monster buckle for use with children's automobile seats. One can also visualise a similar application with the small-mouth-accessible section of the harnesses on the child carriers that are so popular with young families. It has to be much safer than using father's hair as a grab handle.

## Hill safety

In training young would-be mountaineers a great deal of emphasis is placed on the necessity to carry signalling equipment – notably a torch and/or a whistle – against the possibility of requiring emergency assistance. Illinois-based ITW Nexus has developed a couple of products to meet the requirement that demonstrate the value of lateral thinking in a competitive situation.

The first is a combined side-release buckle and whistle,




*Above top:* An example of the National Moldings laser-controlled embossing service. The background becomes 'satinised' giving prominence to the logo.

*Above bottom:* Based on its standard 'Aerohead' assembly this 'Niteglow' system by ITW Nexus is luminous and remains charged for up to eight hours.

suitable, says ITW, for mounting as part of any sternum strap assembly. The whistle component has been operationally measured at an extremely high decibel level.

Although not specifically developed as a signalling device, the second product may well have practical value in this direction. The Nexus Nightglow zip puller is similar in design to the company's standard 'aero' assembly, but the 'aerohead' lock has been replaced with a luminous component. The ITW suggestion for its application was a little more mundane than an aid to rescue (finding your way back to a tent after answering the call of nature), but one can foresee a more useful implication for locating an injured mountaineer on a dark night when the glowing zip pullers have been used as closers on a shell garment or rucksac.

Twenty years ago it was the practice for rucksac and travel pack manufacturers to design and specify their own hardware items. Tooling costs were high but not



***Above:*** The Quad Buckle from ITW Nexus facilitates a four-way hip belt adjustment, which the company suggests is preferable to the more usual method.

unsustainable, and some weird and wonderful confections were produced in the name of alleged end-product superiority. Each company has its own name for this period – usually geared to the identity of one or more directors – and Monday was the least favourite day of the week for the R & D specialists as the weekend's thought processes were translated into projected urgency.

## Offshore influence

As the market became more global and production moved offshore, such indulgences became absolutely uneconomic. The hardware manufacturers picked over the best of the ideas and turned them into standard lines available to all, often with the only option being the placing of a brand owner's logo on the female half of a side-release buckle. Complex designs can cause a loss of integrity to the buckle moulding and a number of logos required simplification before they could be incorporated.

In that context the latest development from National Moldings has some interesting ramifications in that company logos can now be applied to buckle mouldings and similarly sized areas by laser treatment. Depending on the 'burn' period, the result, we are told, ranges in colour from white through to black and gives a permanent satin finish to the design.

The traditional cartoon depiction for a backpacker shows an enormous pack with several extraneous objects attached with loops of string and hooks. It has to be said that the only physical manifestations I can recall have been the bundles carried by tramps and hobos as they move from place to place (perhaps the only true 'professional' backpackers). Nevertheless, as packs become more urban in their popularity, the necessity to attach various aspects of daily life has become more desirous. 'Bike helmets, roller blades, lightweight clothing, spare footwear – are all items that require hands-free carriage at various times. The 'shockcord management' system devised by ITW Nexus has the major advantage of all the best ideas. Simplicity.




***Above:*** The ITW Nexus Shockcord Management System is made up of three hooks, giving the user the option of attaching and detaching the cord from multiple locations.

Essentially the package consists of three separate mouldings that, when used together, give the user the option of attaching and detaching the cord from multiple locations. A 12mm packhook is permanently attached to the pack or bag and used to mount the elastic cord that is then free to move for self-centring under load. A clip hook is a two-part component, a hook and a cord gate, in which both are permanently attached to the cord but are also free to move for self-centring. Finally, an end hook is attached to the loose end of the cord to allow it to become an integral part of the system.

Possibly the ultimate in rucksac hardware has to be the moulded clamshell pack design that surfaced a couple of years ago. Its intended application was the urban scene, since its inflexibility rendered it unforgiving to a true backpacker. In the outdoor pursuits market flexibility of purpose and application is vital. Hardware plays a major part in achieving it.